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ABSTRACT

A meeting report on education within the context of futures studies is divided into four chapters. Chapter One discusses the background of the meeting. Chapter Two outlines the studies presented by each of the eight Asian and Pacific nations represented at the meeting: Australia, India, Japan, Malaysia, New Zealand, the Philippines, Korea, and Vietnam. Responses of these nations to major issues are also presented. Chapter Three, "Issues and Themes for the Region," identifies the value of futures studies, the role of forecasting techniques, and the implications of futures studies for education. The latter category includes discussion of organizations, the interaction between political and educational sectors, curriculum, resources, and personnel. The final chapter looks at current learnings and future perspectives, examining interface studies, education and communication, education and employment, education and technology, and the role of UNESCO. Appendices contain the agenda, list of participants, and list of documents. (LP)

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Bangkok, Thailand, 2 - 8 November 1983

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PREFACE

The Meeting on Education within the Context of Futures Studies was held at the Unesco Regional Office for Education in Asia and the Pacific, Bangkok, from 2 to 8 November 1983. The participating countries were Australia, India, Japan, Malaysia, New Zealand, Philippines, Republic of Korea and Viet Nam. It was agreed that because of the complexity of the issues and the small size of the Meeting, the procedures should operate as informally as possible. Instead of a single Chairman and Rapporteur, different participants shared these tasks throughout the Meeting. The procedures involved discussions of the national papers and the review paper. These were used as bases for the identification of major issues and decisions on practical initiatives to follow the Meeting.

Purpose of the Meeting

The Meeting was opened informally by the Assistant Director-General, ROEAP, Mr. Raja Roy Singh. Mr. Raja Roy Singh emphasized the importance of the Meeting and noted that its origin lay in the expressed interest of member countries. He stressed particularly the distinction between futures studies and two other approaches: future forecasting and 'utopianism'. Future forecasting involved largely quantitative forecasts in particular areas, including demography, economics, for example. Utopianism proclaimed the desirability of a particular style of future. Futures studies, on the other hand, while it may use forecasting methods, makes use of qualitative methods including intuition. It will certainly involve a consideration of what is worthwhile for the future, in the establishment of a nexus between present and future, identifying issues and trends of significance, clarifying values and deliberately seeking to increase the importance of human decisions on the shape of the future. The primary value of the exercise is not prediction so much as the creation of consciousness on matters of crucial concern for the future of man.

Salient points of Meeting

The National Papers were distinctive and varied, but identified a number of common concerns. Major among these was the concern to

make societal change, especially from science and technology, of benefit to individuals and societies. Taken together, the papers represented a good coverage of techniques of social analysis, of identification of values and goals and focused the results of these on education. The final concern was to ask how education might contribute to futures studies and how futures studies might affect education. This was seen as an interaction of considerable importance. The Review Paper discussed these issues further, identifying points of growth which emerged and also areas which needed further consideration.

The Report continues to consider issues and themes for the region, as these appeared in the papers or were identified by later discussions. A key concern is on the values of futures studies, what these might be and who will use them. Three broad groups of values are identified, the first being to identify possible alternatives for the future in order to enable desirable alternative to be emphasized and developed. The second is to build a capacity to recognize problems and difficulties before they become too serious. The third is to assist people and organizations to become future-oriented.

The use of forecasting techniques is considered briefly with the conclusion that current institutions can adequately carry this responsibility. A higher priority is seen in developing detailed implications for education. These included the changes and developments in organization and structure, to take account of future possibilities and a consideration of the interaction between political and educational sectors. Considerable thought was given to the implications of the dual concept of a 'global village' for the curriculum. This led on to a consideration of resource implications and, possibly the most important element, the implications for the many people involved, teachers and the full range of educational personnel needed in a complex support system. Under issues of implementation, these ideas are pursued more carefully, and there is some thought given to issues concerned with the community and with technology.

In the final section, the Report is concerned to answer two questions. The first is, what can we learn from this current round of studies and discussions? The second is what will APEID and its members do, to carry forward these initiatives? In the final analysis the success of the Meeting will depend on the outcomes in countries throughout the region. It is in these futures, separately and jointly, that our endeavours and our hopes lie.

Chapter One

BACKGROUND OF THE STUDY OF ALTERNATIVE FUTURES

Background

The Second Medium-Term Plan of Unesco (1984-1989) has as a Major Programme 'Reflection on Word Problems and Future-Oriented Studies', which is based on the recognition of the need "stemming from the carrying out of future-oriented studies on world problems to pursue educational activity designed to bring knowledge to individuals and communities, and to facilitate at those levels the changes in attitude and behaviour required to deal with the problems identified by the studies".

The Work Plan of APEID's Third Cycle includes "Co-operative Studies, Reflections and Research Related to Educational Development and Future Orientations". The inclusion of this programme area was the result of concerns expressed by many member countries. It is not sufficient for education simply to respond to problems as they occur. There is a strong need to look ahead, to consider the implications for our societies of social and technological changes and to respond in ways which provide the maximum degree of influence over the future. It is of little value to take extreme views: on the one hand, to ignore the impact of scientific and technological change; on the other hand, to accept a technological 'determinism', assuming that technology will define the future for us. In the period ahead, there are many major social objectives and values which each society would wish to maintain. It was the concern to take proper account of these that prompted the inclusion in this programme area of the emphasis on alternative futures.

Invitations to participants

Papers to synthesize and document studies on alternative futures and their implications for education were invited from eight countries: Australia, India, Japan, Malaysia, New Zealand, Philippines, Republic of Korea, and Viet Nam. The papers themselves

provide a valuable resource. They indicate the thinking of each country with respect to the future, and in particular the part that education could play. The papers also include a brief summary of significant writing, of particular relevance to the particular country.

As will be seen below from the summarized forms, the papers represent a valuable variety of approaches. This is of course to be expected, considering the range of situations represented, varying in geography, in history and in culture. They are therefore valuable both for what is distinctive in the approaches and also for what is common. The distinctive elements may represent simply a choice of approach, for example, emphasizing the technical aspects of futures forecasting, or they may represent the cultural distinctiveness of a particular country, for example using the writing of key national thinkers as a means of defining an approach. The common elements are equally valuable as they can represent what is universal in the aspirations of people and countries, towards the future. For example, a hope which occurs in many studies, in slightly differing phrases, relates to becoming 'fully human'. It relates partly to the ambition that science and technology should be the servants of people, enriching their lives, rather than the determining factor. It relates partly to the hope for a more just, equitable and caring organization of society, an organization directed to the fuller enrichment of human life.

The Review Paper commissioned by APEID was requested to take note both of the distinctive and the common features of the national papers. The paper analyses the issues in futures studies to emerge from the national papers, including the value of such studies; approaches and techniques seen to be of use; and ways of using futures studies. It continues by identifying major thrusts of the papers, ideas and activities which could be used as growth points and, also, gaps in the studies which would require further attention. The Review Paper concludes with the following words:

> At this stage in the history of our region, in world history, we still have a number of futures available to us. Some of those futures are disastrous, others offer opportunities for fuller, more constructive, more satisfying lives for the people of our region. To the extent that we fail to think and act now, the choices available to us will diminish and become limited to destructive and violent possibilities. We

can all contribute to better solutions for a world in which our futures are interdependent.

The point of meeting together is for a real interchange on these issues. On issues of such importance, interchange does not always mean agreement. What it can mean is a greater understanding of and respect for other stances, as well as many points on which views will come closer together and may coincide.

Chapter Two

THE COUNTRY REPORTS

Preamble

Eight national studies were the basis for this Meeting. For reasons of space, they cannot be included as total reports. Nevertheless they constituted an invaluable resource for the Meeting and that resource will still be available to continue the initiatives commenced here. It is important, however, that the report should convey an impression of the variety and emphases of the country papers.

To do this, a brief national summary statement is included for each participating country. None of these is a precis of the country paper, but a summarized reaction, and in no sense a substitute for the paper itself. In view of the breadth of the ground covered, some indication is useful of the way in which the Meeting envisaged the major concepts of the disscussions and the studies, *education*, and, *future*.

Education is used in the broad sense as a process which continues throughout life – 'from the mother's lap to the grave'. It is a process which takes place in a variety of settings: schools; the family; the religious group; in personal interchange and experience, through formal, informal and non-formal channels.

The term future is not used in the sense of a single entity. There is not a predetermined and fixed future which will happen regardless of our effort. The future is partly implicit in the present but is also subject to choice. The search for a more humane future must therefore commence with a critique of the present, but will also need to take into account the possibility of change, sometimes predictable, sometimes not so.

Education and development are mutually interdependent. The former is not only a derived variable. It is a causative element in the system of interdependence and it interacts with other sectors in the development process leading to the future.

The papers themselves, as indicated, are varied in form. The Viet Nam Paper, *Strategy of Educational Development for the Year 2000*, is the production of a team of invitees, based on the National Institute of Educational Science of Viet Nam. It was produced as a collection of papers from a symposium at the Institute. It is less concerned with predictions than with defining a strategy. This is done by indicating governing principles, using them to define objectives and proceeding to identify, firstly immediate tasks and then, the targets for educational development for the next two decades. The collection thus outlines both a philosophy of approach and a means of implementing, down to considerable detail. A major requirement for successful implementation is seen as the preparation of suitable personnel, with both the commitment and the skills required.

The Republic of Korea Paper, *Review of Literature on Alternative Futures of Korea and Techniques Used for Preparing Future Scenarios* summarizes ten major studies on alternative futures of Korea. The papers summarized vary considerably in nature, some being highly technical manpower and population projections, others being more philosophical in approach, describing and analysing social possibilities. A synthesis is then made of the ten papers and an analysis is given of techniques used for preparing future scenarios.

The Philippine Paper, *The Philippines: Alternative Futures* uses two major studies as its sources. The first is *PREPF, Population, Resources, Environment and the Philippine Future*. This was produced by a consortium of three institutions of higher education and was primarily quantitative in character. The ultimate result sought was to determine what Philippine society would be like in the Year 2000, through a consideration of these three contributory aspects. The other study was different in character but not in purpose: *PTFC, The Philippines Into the Twenty-First Century*. It is a collection of individual papers developed between 1976 and 1978, attempting to assess the current Philippine situation and to indicate the kind of society it could become in the 21st century. It is a much more normative statement, with clear indications of the values and positions held.

The New Zealand Contributions consider historical and current activities in that country, both at national and regional levels.

The most significant programme of future studies in New Zea-

land has been that of the New Zealand Commission for the Future which was established by the Government in 1978. During the few years of its life, the Commission co-ordinated a wide programme of research and consultation and directed its major efforts to raising the level of public awareness. Their example encouraged other agencies to draw up alternative scenarios for their own future; the Canterbury United Council (1983), for example, has prepared a public discussion document which sets out four possible futures in a first step towards the identification of a preferred development strategy for the Canterbury region. Other writers, including Cant (1983) have produced individual perspectives on New Zealand's future. A comprehensive overview, with full bibliographic listings, is now being prepared by Pickens, McDonald and Livingston of the New Zealand Council for Educational Research.

The Malaysian Paper, *A Study of the Probable Futures of Malaysian Society in the Year 2000 and Their Implications for Education* was produced by members of the Faculty of Education, University of Malaya. It was a study made specifically for this purpose and involved obtaining the views of thirty Malaysians concerning alternative futures and their implications for education in Malaysia in the year 2000. The thirty people were chosen from a range of professions and asked to respond under an approach called Ethnographic Futures Research developed by Robert Textor. Three broad scenarios were developed, a pessimistic scenario, an optimistic scenario, a most probable scenario, and these were then used to achieve a plausible model for change. Implications for education were then developed.

The Indian Paper, *Education and the Future – An Indian Perspective,* was produced at the National Institute of Educational Planning and Administration. It commences with a reflective analysis of education and the future. The second part has a stronger empirical emphasis but also considers major Indian thinkers, such as Tagore, Gandhi and Nehru in assessing the current situation and the desirable directions of future development. It concludes with a broad view of the social future and also of the ways in which education must help both to form and prepare for the possibilities of that future.

The Japanese Paper, *Review of Researches of Alternative Futures and the Techniques of Preparing Future Scenarios,* is the most technically oriented paper. It deals with individual and comprehensive forecasting methods, and gives detailed examples of some

approaches. Under Individual Forecasting it covers: Exploratory forecasting – trend extrapolation, time series model, econometric model, comparative interpolation; Normative forecasting – systems analysis, network method (e.g. PERT); Intuitive forecasting – Delphi method, cross-impact matrix method; and Feedback, including a combination of these approaches. Comprehensive Forecasting is considered as an approach which uses individual methods but supplements their limitations. Approaches mentioned are Scenarios, Developmental Stages, Systematization of Social Structure.

The Australian Paper, *Futures and Education*, made a survey of relevant literature from Australian and, to a lesser extent, European sources. It identified a considerable body of material and projects but commented that most of these stopped at the stage of making forecasts, and did not involve substantial follow-up discussions. The paper stressed the importance of clearly identified values statements as a part of futures study, using the major justification of such studies as their capacity to enlarge the area and effect of human choice in shaping the future. It considered factors affecting the nature of future forecasts: areas of continuing concern, such as war, areas of unpredictable change, such as technology, and stressed the essential continuity, through change, of human characteristics. It then went on to consider some of the possible lines of development for the future.

Each of the papers included a substantial reference list and this itself, as a total collection, will be of value to others who undertake such studies. Of even more general use, is the annotated bibliography of up to 10 significant publications included in each national paper. This will compose a broadly based regional set of reference materials.

As important as the papers themselves is the process they represent. The production has meant that each of the countries has initiated a dialogue on issues of the future and that dialogue is likely to continue. This is likely to assist towards a wider regional awareness of the possibilities which are what we can identify of the future. It is likely also to lead to a more activist approach, realizing that considerable freedom exists to make the future a more equitable and supportive time for our societies.

Country responses

Australian response

a) *The importance of identification of values*

A strong need exists, not merely to forecast possible futures, but to identify those aspects to be discouraged or encouraged.

It is easier to admit the importance of the future than it is to suggest appropriate ways of preparing for it. In one sense, we cannot and should not merely prepare for it. To a considerable degree we need to be involved as much in shaping the future as in attempting to describe it. The future involves changes in demography, in economic possibilities, in the use of resources, in political alignments, in science and its applications, to mention only a few areas. The parameters of change in these areas are fixed to varying extents: in some, the limitations are considerable, in others they scarcely exist. An appropriate approach to the future is a recognition of the limits of the possibilities in the areas of human interest and a determination to use these possibilities for the enhancement of the value of life. It cannot then be an objective and scientific study, since it depends heavily on our identification of basic values for human life and human society. There is a range of possible futures: in economic terms, in political terms, . . . The task of those confronting the future, and it is a formidable one, is to clarify the limits of the possible, to assess within these limits the probability of various alternatives and while taking account of the possible and the probable, work towards options which are at least acceptable and, if possible, desirable. In the end, the justification for futures studies rests on their capacity to enlarge the area and effect of human choice on the future.

b) *Implications of futures studies for education*

The major significance for the regional study comes in the identification of possible implications for education. Education is of necessity future-oriented since its current students will be the decision-makers of the year 2000 and beyond. Those currently completing secondary education will be entering the arena of major decision-making on the national and international scene about the year 1990. Those currently entering primary school will be involved in a major

way until at least 2040. This half century of human history will be shaped, for good or ill, by the nature of the education provided for those now at school. How confident can we be that we are providing the best possible foundation?

The various studies identified both continuing issues which provide substantial focuses for the future and the certainty of unpredictable changes of a discontinuous nature. The areas of continuing concern include the following.

- National and Individual Security – war, terrorism, violence, crime.
- Resources – availability, equity, sharing, conserving, preserving the environment.
- Participation – including economic equity, sharing in decision making, in health, vocational choice, government, education.

The areas of unpredictable change include the following.

- Technology. The century has already seen revolutionary changes in communications, transport, vocations, for example, occurring through technology. These changes have brought subsequent alterations in employment patterns, the use of leisure, health, housing. We cannot predict either the size or the nature of future changes, but we do know they will occur, probably at an increasing rate.
- Life Style. Technological and other changes have radically affected life-style. The most obvious change is a result of population growth and the associated changes in health, welfare, housing, urbanization and transport.
- Politics. Again this century has seen unprecedented changes; the end of some forms of colonialism, new nations, new groupings of nations, new forms of national and international government, major international rivalries and major international co-operation. Again we cannot predict the changes of the future. Yet we need to be prepared to meet a variety of possibilities.

Human values will remain as crucial

In each of the studies, the centrality of human values is stressed

and the importance of the recognition of the enduring nature of worthwhile values appears clearly, especially in the context of predictable and unpredictable problems and changes. This realization is crucial to the response of education, which remains at heart a morally-based process.

The future issues considered so far have involved ones which will persist and also changes of an unpredictable type. This may exaggerate the effect of external factors in contrast to the elements of human personality which will remain as crucial. Important as are the issues of technology and the economy they are less important than the choices people make about them.

Harry Broudy in the book *Education 1975-2000* (Hipple, 1974) emphasized the continuity of human characteristics, even in the pressures of rapid technological change. He pointed out the enduring nature of the main features of human personality: imagination and a sense of morality. He stressed the continuity of psychological motivations: love, hate, ambition. He pointed out that while surface manifestations changed that the sense of morality still involved the same features: temperance, courage, loyalty, truthfulness, integrity, ... Mankind's desire for self-realization and self-integration also were seen as remaining constant.

The importance and the continuity of human characteristics set special problems and opportunities for education. It is clear that the complex technological, political and social factors that we have considered need to be comprehended in a way which makes them more a matter for human choice and less a matter of unconsidered change. In the preparation for rational and moral choices, education could play a key role.

c) *Tentative guidelines for future work*

The following points are made as a basis for discussion, and are based on the presented papers.

i) The future pursuit of the technical aspect of futures forecasting and of its methodology is not a major priority for APEID. While it is profitable for specialized institutions in the member countries to pursue such issues where they have an established expertise, the main thrust of APEID's activity should be in the use of existing work and procedures:

- to continue with the identification of issues and changes in science and technology, in work patterns, in social organization and values which are of importance to education;
- to concentrate on the organizational and procedural responses appropriate from education to meet currently agreed purposes and to maintain an evaluation of both purposes and processes.

ii) The base of the process of futures consideration needs to be widened. There are many bodies and individuals identified in the region involved in futures studies. Most of these activities end at the stage of defining probable and/or desirable scenarios. It seems essential that a wider base is sought for such discussions if there is to be support for longer-time activity. A major problem for governments is to obtain the interest of their people in longer-term issues. The temptation is to concentrate on immediate problems and immediate solutions, even where these are detrimental or unhelpful in the long run. A major role of educational institutions in APEID member countries may well be to broaden and deepen the base of discussions on future activities. It seems likely that major changes in attitude and social organization will need to be made in our societies to protect worthwhile values from being eroded, almost unintentionally and accidentally, in the course of changes in such areas as science and technology where we fail to follow up the implications.

iii) Our education institutions need to strengthen their own capacity for forward planning. It is of little use advising others to be more future-oriented, when our institutions seem to be oriented almost entirely to the solution of today's problems (or even yesterday's) but have neither the structure nor the procedures suited to forward planning.

This will involve a detailed and careful consideration of the roles required for people in our education institutions and of the ways we prepare them.

The possibility that education will implement an approach of the sort outlined here depends partly on the

degree of urgency felt about the current situation and partly on the establishment of a suitable and continuing organizational form to implement and monitor change.

iv) A key element in the response of education to this situation is a rethinking of the basic phase of compulsory education, with particular emphasis on the secondary stage.

Two aspects are important in developing an adequate concept of what is 'basic' in a general education for all. Pre-eminent in these are the expectations held by a democratic society for its citizens. It expects them to undertake the full responsibilities of citizenship: voting intelligently, taking an interest in political issues, understanding and supporting the legal system, taking responsibilities within the community. It expects them to undertake vocational responsibilities: preparing themselves for employment, making career choices at appropriate times, developing appropriate skills and attitudes. It expects them to develop as individuals: having a sense of self-respect, making appropriate decisions on health, accepting the legitimate rights of others, respecting others and participating effectively with them, having a range of cultural interests, developing a consistent, operational and acceptable moral code. This is a formidable list but it represents an appropriate concept of citizenship in a democratic society. Further, it may be a necessary condition for the survival of democratic society. As we have seen, the world societies have to make difficult choices in a variety of complex areas: technological development, ecological conservation, resource development and distribution, social justice, world peace. Democratic governments have to make decisions in these and other interrelated areas. To do so, they need the agreement of a substantial majority of their citizens. The need to make decisions of long-term benefit which may imply short-term deprivation is one which all governments find difficult. Democratic governments can expect to do so only through a well-informed and internationally benevolent electorate.

The second aspect with respect to what is basic concerns the possibilities made available by technology.

These begin with relatively simple developments such as calculators. With these a wide range of arithmetical skills performed with complete accuracy becomes available to all: the implication of this availability is that an understanding of how to use such computation

becomes more important. Similarly information is now available from more sources than the priest, the teacher, the parent, and printed papers. There is a flood of information, via radio and television and through recordings of many topics. What becomes important is the capacity to assess the value of information, to judge its relevance, to use it effectively and efficiently in making decisions. The computer opens up still further levels of possibilities: in providing access to information throughout the world, in storing and analysing information, in solving problems. In this area as in the others, a capacity for performing immense quantities of lower-level skills places an increased value on higher-level skills, on affective, aesthetic and moral decisions which can only be made by humans.

Conclusions

One clear message emerges among others from the studies. It is this: despite the wide variations and differences in social, cultural, economic, political and religious patterns, it is meaningful for our area to speak of a regional response to the challenge of the future. In fact, it may well be that to maintain what is most precious in our individual heritages that we must learn to study, to plan and to work together in new and constructive ways. These individual studies have pointed the way. It is to be hoped that this meeting will lead us in a constructive dialogue towards a better future.

2. Indian response

a) The study of alternative futures calls for, to begin with, a future-oriented view of the future as well as of education.

Alternative futures are internally consistent systems of possibilities. It follows that though only one of these systems would finally get actualized and therefore there would be one and not many futures, this future in the singular is not pre-determined and fixed, descending on mankind with a fatalistic inevitability against which we can at best develop an early warning system as in the case of a typhoon or an earthquake. This singular, ever-receding, elusive future is fashioned by societal decisions in an ambience of freedom as a cognizable necessity. It is being continuously moulded and remoulded in the crucible of time through a series of presents, wherein innumerable choices are made by the *homo sapiens* between systems of interdependent possibilities. The future itself is destined to

become the present and merge in the ocean of time as an element of the past. The future merges with the past through the present, and the past moves towards the future through the present. The search for a humane future must therefore, of necessity. commence with a humane critique of the present.

Education is the ability to abstract universals of varying orders from the specifics of social experience, to systematize them into a hierarchy of intellectual constructs and to impart them to the newer generation so as to enable it to build upon its heritage and continue the task of further abstraction and of humanization – of making man more man. Education is increasingly becoming a continuing process stretched over the entire life span of man – from the mother's lap to the grave. It is being made available through formal, informal and non-formal channels – through the textbook, grandmother's tales, folklore and the rising sun.

Education and other aspects of societal transformation towards the future are mutually interdependent. The former is not a derived variable but should be considered to be an essential element in the system of interdependencies which continuously interacts with other elements of the system leading society through the corridors of time into the portals of the future.

b) The educational sector will play such an all-pervasive role in the world of tomorrow only to the extent that it is able to respond adequately and properly first, to the pressures being exogenously exerted on it by the deepening contradictions between man and non-human nature as well as between the unity of the globe and the fragmentation of the world; and second, to the stresses and strains being generated indigenously within itself by the sharpening contradictions between tradition and modernity, between integration and specialization, as well as between work and knowledge.

i) Education of the future must restore the primeval unity of man and nature at the qualitatively higher level of the eco-system and get rooted again in the monist view of reality which had been lost in the mad rush to conquer nature generated within the profit syndromes of class societies. The eco-system provides the closest conceptual approximation to the integrated complexity of objective reality and, may, therefore, serve as the basis for the most relevant ideology for the twenty-first century.

ii) Education of the future has to prepare the social psyche for the globalization of society, on the one hand, and its differentiation on the other. It has to come to terms with the specific without becoming parochial, philistine and mundane; and with the universal without becoming other-worldly, ethereal and "divine". It would become human and humane, the conscience of mankind, smelling the earth and yet gazing into the stars.

iii) Education of the future must contribute to the resolution of the contradiction between the integration of the globe and its fragmentation. The fracture in the human condition brought about by the hammer strokes of industrial capitalism must be healed in the interest of not only those who have been at the receiving end but for mankind as a whole. Educational policies must be intrinsically intertwined with the basic structural changes without which the new international order would remain just an ideal dream. It must clean deterministic cobwebs which posit that poverty is nature's gift and the deprived must learn to live with it as with natural catastrophes. It must correct the perspectives of those who search solace in the spurious spirituality of povery as well as those who seek meaning and purpose at the consumerist counters of affluence. Education of the future must combine the sophistication of the city with the earthiness of the village and thus restore the rural-urban continuum in the living style of mankind.

iv) Education of the future in a hopefully more equal world will face the challenge of import substitution in the field of educational endeavour on the basis of rejecting both fossilized tradition and rootless modernity and of the modernization of self-reliant national traditions themselves.

v) An important internal force of self articulation within the autonomy of the educational realm relates to the knowledge explosion. Since the humanising task of education essentially lies in passing on the accumulated social experience of mankind to the newer generation and since knowledge is the abstraction of this experience, the accelerating expansion of the knowledge realm has serious implications for education. The invention of writing, the movable type and the compu-

ter mark three quantum jumps in the expansion of knowledge. As many titles are produced in a day now as were in a whole year during the fifteenth century; and perhaps in the whole of the first millennia. The increase in the load of the learner as well as in the rigour of learning calls for a fresh look on pedagogic theory and practice. Just as the production processes were fragmented in the wake of the industrial revolution into smaller and smaller units on grounds of "efficiency", knowledge was also broken up into fragments for analytical purposes. The vital search for the multi-splendoured knowledge of the multi-faceted reality quite often tended to degenerate into the soulless technical exercise by the alienated. The scientific-technological revolution of our times is generating a qualitatively different model of the learning process which emphasizes the nomothetic rather than the ideographic, the holistic rather than the fragmented. The encyclopaedic holism of ancient and medieval learning was transformed by the industrial revolution into its opposite, that is, into fragmented units of knowledge. The latter is once again being transformed into its opposite by the scientific-technological revolution and its primeval unity is being restored, albeit at a higher level. The education of the future will be required to build the intellectual milieu for such a restoration. There are indications that this would be done in the following ways.

First, there would be greater emphasis on knowing rather than on the known, on how to know rather than on what to know. Logic – both quantitative and evalitative – would acquire a pre-eminent position in the educational endeavour as it embodies the finest abstraction from the concrete and the *terra incognita* is explored with its help. It may be noted that the ratio of the area that is known to that which is known to be unknown remains constant. In other words, every knowing is at the same time a not-knowing. The answer to one question generates ten questions that clamour for answers. Such a model of the expanding realm of knowledge calls for an educational system which essentially sharpens the tools of knowing.

Second, there would be greater emphasis on the generic rather than the specific. It would become possible to encompass the expanding universe of knowledge by basing pedagogy not on the

minutae of detailed information units but on unifying intellectual constructs of a higher order. Mendeleyev's periodic tables make the "load" of chemistry on the learner substantially lighter.

Third, there would be greater emphasis on holistic principles of organization of knowledge. – the *chronological* and the *chorological* principles. The realm of matter in motion which man cognizes through social practice exists in a time-space continuum. Time and space constitute the principal forms of the existence of material phenomena; and are, therefore, as objective as matter itself. If that, which is, exists in a space-time continuum, its proper understanding not only requires the disaggregation of the totality into aspects for deeper study but also its synthesization in terms of the two elements of the continuum. Thus alone would the products of cognition – from primary perceptions to the most complex intellectual constructs – get systematized properly and adequately. Academic "disciplines", the resultants of the first of the two processes, concern themselves with segments or facets of the multi-dimensional reality. The second of these processes has led to the emergence in the world of knowledge not only of two "disciplines" in the narrow sense of an organized body of knowledge but also as the embodiment of two complementary principles of the organization of knowledge of that which exists and can only exist in a time-space continuum – the disciplines of History and Geography. That which studies variations and interconnections essentially along the time scale is History; that which studies variations and interconnections essentially along the space scale is Geography.

Fourth, there would be greater emphasis on multi-and inter-disciplinary approaches. Like the seven blind men, the aspectual disciplines focus their attention on limited segments and tend to get a distorted view not only of the whole but of that segment as well. This realization has influenced the educational endeavours of our times quite profoundly. It has led, firstly, to the strengthening of the common base of general education in the schools; secondly, to the combining of the principle of disciplinary specialization with that of inter-disciplinary concerns; thirdly, to the emergence of binomial disciplines along disciplinary borders e.g., Chemical Physics or Historical Demography; fourthly, to the diffusion of concepts from the source discipline to others, e.g. of gravity from Physics to migration studies in Demography and commodity flows analysis in Economics

and Geography; and lastly, to the sharpening of the philosophical concerns in all disciplines particularly in the hard sciences.

vi) Education will have to get strongly rooted in work in order to become the education of the future. It has to help man transcend his animality and at the same time protect him from degenerating into mindless robots.

3. Japanese response

a) From the point of view of identifying possible alternatives for the future, the only experience of post-war Japan that truly deserves the name of future study is the 1960s manpower forecasting. (It goes without saying that the first and the most far-reaching future study of modern Japan was that done by the leaders of the Meiji Restoration, but this is excluded from the present report.) It had a close connection with national economic planning such as double income policy, which was the guiding principle of Japan in 1960s, and could derive a considerable support from the business and political leaders and also from other wider circles, consequently succeeding in drawing more money for education. But people's educational aspirations far surpassed the target goals set by manpower forecasting. (The paper by Prof. Ushiogi in the main report depicts a catastrophic "oversupply" of university students, which he forecasts will continue for another decade). This cleavage has so far been resolved, after all, by the dual structure of Japan's educational system – the public sector which has been and still can be more susceptible to manpower approach and the private sector which has managed anyhow to respond to ever-growing educational demand in 1960s-1970s.

All in all, manpower forecasting of the 1960s succeeded most in playing the role of lobbyist, and substantially in supplying the much needed scientific and technical manpower, but definitely not in being the guiding principle of educational policy in general, contrary to its own intention. However, we yet do not have future studies that are more worthy of being so called than manpower planning of the 1960s. Major economic and social plans have been made since then without taking education into consideration as an important independent variable. A paper which is included in the main report and which was excerpted from a report by the Economic Planning Agency is one such example, and a publication by the same agency listed at No. 7 of the annotated bibliography is still another example much more to

the point. This book, named *"National Life in the 21st Century"*, briefly touches in Chapter 4 upon the future picture of Japan's education. But the images stated there (diversification of education and reformation of social education and school education, for instance) are based upon the Delphi manipulation of educationists' opinions, and accordingly still remain an expression of their longings for a desirable change of education which are hoped for from a desirable change of economy and social life.

b) As for the building of an "early warning system", we have failed fatally. Educational policy priority is now forced to be put on the solution of problems such as "leisure centre" universities, a steady increase of dropout rate at the upper secondary schools, involuntary attendance and violence at the junior high schools caused by children being unable to keep up with the lessons, so-called "examination hell" supposedly brought about by the credential society and so on, all of which are the aftermath of 1960s expansion. These problems were predicted by some people, but most of their warnings were based primarily not on the induction from an empirical study of education and society but on an ideological opposition to the ruling party's policy. So, their critical comments could not persuade the general population beyond a certain limited circle. To build an "early warning system" that works efficiently, it is urgently needed to base our judgement on a firm knowledge about the systematic interaction between education and society.

c) The above stated failure is deeply related to the difficulty we now have in achieving the third task. In Japan, there has been a sharp cleavage and conflict between the ruling party (LDP) and the opposition parties (JSP and JCP above all) on these issues about the fundamental values in education, the desirable content and curriculum of education, the ascription of the final responsibility of educational policy and so on. These fundamental ideological conflicts have long hindered the development of groups of academics and researchers with future-oriented and problem solving-oriented minds, and have delayed the formation of appropriately oriented intellectual circles from a broad spectrum of disciplines. This might have been the cost of maintaining democracy in Japanese style, but the very formation of intellectual circles of this kind may be able to bring about some change in the political situation.

4. Malaysian response

The setting

As Malaysia moves into the 1980s, it will face:

a) *Economic problems*

i) World economic recession leading to low capital formation;

ii) Implementation of the New Economic Policy bringing in its wake:

- intensification of economic competition on an inter-ethnic basis,
- increase in government control and interference in economic enterprises,
- intra-ethnic competition on the economic front; and

iii) Enhanced employment opportunities in the face of rapid technological innovation, mechanisation and computerisation.

b) *Political issues*

i) Since decisions of the political elite are taken, more often than not, to create an immediate and a favourable impact on the people, tney are less concerned with long-term consequences of their decisions;

ii) Communal politics will be intensified as the sense of insecurity and distrust between the various communities increases;

iii) Authoritarian rather than liberal leadership is anticipated – the opposition will remain a force that is weak; and

iv) Reconciling demands on an intra-ethnic and inter-ethnic basis.

c) *Social and cultural problems*

i) Breakdown of traditional values and religious beliefs as a consequence of rapid modernization;

ii) Greater polarisation of people on communal, religious, social and cultural bases;

iii) Population density of major cities will have increased to outstrip any increase in services and facilities;

iv) Environmental problems will arise from urbanization and industrialization programmes; and

v) Formation of the nuclear rather than the extended family structure.

Alternative futures

Three alternative futures are projected:

a) Optimistic scenario. It is one which is not quite the best that can occur but is highly desirable. The depicted events are within the realm of the possible, and propositions are positive and assertive in nature.

b) Pessimistic scenario. It is one which is not quite the worst that can occur but highly undesirable.

c) Most probable scenario. It is the scenario most likely to occur.

Implications for education

a) National integration

i) Implementation of Bahasa Malaysia as a common medium of instruction and communication; and

ii) Encouragement to learn a second language in the vernacular or European tongue to build a learning society.

b) Education, equity and efficiency

i) Implies the democratization of educational opportunities and the eradication of inequities in access to education at all levels regardless of socio-economic status, ethnicity and sex; and

ii) The education system will have to increase its efficiency in the delivery of education services through decentralization of the curriculum, change in the nature and methods of instruction to enhance learning skills, de-emphasizing orientation towards examinations, professional training and non-formal education.

c) Education and economic productivity

i) A learning society will enhance work performance;

ii) General education will precede specialization at the tertiary level and through on-the-job or in-service training; and

iii) The Look East Policy is perceived as another source of innovation to require desirable work ethics and technological skills.

d) Education and socio-cultural values

i) Education is one of the primary agencies of socialization; and

ii) Educational institutions and mass media will provide enrichment programmes which lead to a greater appreciation of music, fine arts and other aspects of our rich cultural heritage.

5. New Zealand response

The setting

As New Zealand moves towards the twenty-first century, it will face;

a) Economic problems relating to energy production and consumption, and employment opportunities; and

b) The need for bureaucratic changes at the central and local community level.

Alternative futures

Three alternative futures have been envisaged for the country. These are:

a) An industrialized urban society characterized by high consumption and dependence on international trade;

b) An industrialized state operating within the world system but with the emphasis on self-reliance; and

c) A self-sufficient and small community-based society characterized by low consumption.

Implications for education

Depending on the choice of alternative futures, education will perform the following functions:

a) In an industrialized urban society characterized by high consumption, the education system is to equip people with the necessary skills to maximise high technological advancement;

b) To achieve an industrialized society with the emphasis on self-reliance, education provided will inculcate self-reliance on the part of individuals and small communities; and

c) In attaining a self-sufficient but small community-based society characterized by low consumption, the role of education is to emphasize self-reliance, enhance communication between individuals in and outside schools, colleges and universities, and to instil a desire for life-long education.

To achieve these educational objectives, the suggestion is made that the central government:

a) Increase employment opportunities and restructure the link between education, full-time employment and part-time work;

b) Alter present emphasis of curriculum so that it will not only prepare individuals for work but also for maximum utilization of leisure hours; and

c) Maintain a balance between formal and non-formal education.

6. Philippine response

Within the last decade there have been two major studies of the Philippine future.

a) Population, Resources, Environment and the Philippine Future (PREPF) projections suggest the following:

i) Whatever its nature, that future will occur in the context of a global situation in which the United States of America and the Union of Soviet Socialist Republics will con-

tinue to be the major protagonists. In Asia, Japan will become a major influence in the economic, political and military relations of the region. Likewise China is expected to play an increasingly important role. Small countries like the Philippines may seek a non-aligned position or, at the very least, maintain some distance from these powers in the event of a conflict. For the Philippines, this may be a difficult objective, in light of the American bases on its territory and the dominant influence of the United States and Japan on its economy.

ii) In the year 2000, the population is expected to reach more than 79,000,000, and the economy will maintain its quasi-capitalist structure. The stress on export-orientation is also likely to continue, with attempts to develop in an agro-industrial direction.

iii) The educational future is forecast in terms of numbers: How many school age youngsters are expected to be in school by the year 2000? How many types of educated labour would be needed by this type of economy? How much would such education cost?

v) The implicit theoretical premise of such educational forecasting is human capital formation.

b) The Philippines into the twenty-first century (PTFC)

i) Although the same geopolitical world and regional situation is anticipated by PTFC, this study envisions a socialist policy and economy with a strong nationalist orientation.

ii) This orientation carries over to education which will aim to educate and train Filipinos whose first commitment is to their country.

iii) Such structural changes imply changes in education:

It may be inferred that the changes comtemplated for education in the twenty-first century include:

– A stronger emphasis on equity as an objective. In this connection, the scenario also states

> We have avoided the mistake of pursuing the myth of absolute equality. This is valid only for our basic needs.

There must be an intellectual contingent who can serve the people with their minds. Equality lies not in abolishing the intelligentsia but in equalizing access to membership in that group,

- Basic education for all that emphasizes the development of citizens who serve with intelligence instead of blind obedience,
- The deschooling of job training,
- Dramatic alterations in educational structures, involving considerable debureaucratization,
- Teachers who are considered very important and whose education is continuous. Mobile mini-colleges of education which can reach teachers in the hinter-lands are part of this scheme,
- The curriculum would include the study of major contemporary problems: environmental pollution and degradation, population, appropriate technology and the like. It follows that scientific inquiry via research, experiments, field study, simulation, group approaches would be part of teaching/learning methodologies,
- Less emphasis on tests and examinations and more on performance as a criterion for evaluating learning,
- In fact, there would be a strong emphasis on *learning* rather than on grades, certificates, credentials etc. This would be an attempt to reduce the "diploma disease", which is one adverse result of a transplanted school system,
- The use of modules and the mass media for appropriate portions of subject matter viz., arithmetical operations, complicated experiments to be shown on TV which permit close-ups without the dangers of observer effect,
- A communication system within education that is fast, vertical as well as lateral, with emphasis on feed-back from the grass-rots,
- A national language of instruction at all levels; the study of international languages, primarily English, and others, viz., Spanish and Southeast Asian languages,
- A deliberate orientation towards nationalism and decolo-

nization, including the development of truly Filipino literature and art,

- A vigorous policy of equalizing educational opportunity, including the elimination of spurious distinctions between formal and non-formal education.

This vision of education is ambitious in scope and nature; it is consistent with a basically egalitarian policy and a people-oriented economy.

7. Republic of Korea response

a) *A possible Korea in the 2000s*

Korea in the 2000s is forecast to be, economically, a post-industrial society where the tertiary industries are emphasized. The society will be achieved with the strong support of highly developed science and technologies. Information – technology and automation will be the main characteristics of science and technology developments and the entire mode of life is expected to be affected. Socially, population growth will still be a most serious problem, but it is a general expectation that people will be supported by various welfare policies such as expanded social security, health and nutrition and equitable distribution systems. These future scenarios are strongly influenced by the political power and direction which will expect to move forward to a pluralistic democracy under the situation of balanced modernization. This kind of Korean society will be achieved satisfactorily, depending on the successful solution of problems to be confronted such as resource depletion, pollution of nature, food shortage, and other internal pathological trends.

b) *Educational implications*

i) It is a critical finding that in all social aspects the humanization of people is commonly requested as the first and the most crucial condition to accomplish a preferable future Korea. The man with this key characteristic is idealized as the "humanized person". The humanized person still needs to be equipped with some other characteristics in both the personality and skill aspects.

The firm sense of identity and morality, independence and creativity, integrity and open-mindedness, and future-orientation and

adaptability are most important personality characteristics, while basic knowledge and skills in science and technology and in living and career aspects are required in skills and knowledge aspects. Furthermore, the humanized person is expected to be a generalist first and then he can be professionalized when necessary in a vocational perspective.

ii) For building this kind of ideal person, "education for all" cannot but be a goal inevitably accepted and then the entire population ought to be taught for their survival in and contribution to the changing society. This goal is expected to be accomplished through providing innovative education programmes for early childhood, for youth and adults, for college and university graduates, and for the disadvantaged and the handicapped.

"Education as a life-long process" is another inevitable requirement for all citizens not only for their second and third careers but also for keeping them updated on new developments and changes. It is crucial to integrate home education and social education into the total education system and then early childhood education at home needs to be reoriented and all social organizations are to be social education institutions. The key principle in life-long education is that all citizens will be involved in "learning how to learn".

Education for the humanized person, education for all and lifelong education are conceptualized as needed for the future society.

iii) In order to develop this future citizen, "excellence in education" is urged for individual learners, for schools and colleges, and for the society. All individual learners are requested and assisted to work to the limits of their capabilities and schools and colleges are expected to encourage all individuals to reach high prescribed standards. The society is also asked to prepare people through education to respond to rapid changes.

iv) The construction of "a learning society" is another important request for educational reformation in close linkage with life-long education. This calls for people to commit themselves to a set of values and to a system of education which enables all members to have opportunity to extend their capacity to the fullest. It is also crucial not only for contributing to career goals but also for

enhancing the quality of life in general. In the learning society, all kinds of environments are to be the learning materials and situations.

8. Viet Nam response

a) *Viet Nam in the year 2000*

The Socialist Republic of Viet Nam with a population of 55 million people is a developing country just emerging from 30 years of war. It covers an area of 330,000 square kilometres with a long coast line and is rich in resources.

The two following strategy tasks have been agreed:

i) To build socialism successfully to bring a spiritually and materially happy life to all people in the country;

ii) To firmly defend the Viet Nam fatherland.

These two tasks are closely linked with each other.

b) *Educational tasks*

i) Effective education of the young generation. Since the continuous education of the child from a new born baby to an adult is essentially significant in forming his socialist personality, we undertake, step by step, to involve the whole society in the education of children, so that every child may enjoy equal access to education irrespective of his own family, race and locality background.

ii) Universalization of education. Everyone's equal right to education is ensured and educational development for ethnic minorities is another priority.

iii) The training of a work force in harmony with labour distribution in socialist large scale production. The importance of vocational education, which aims at turning out enough skilled technical workers and qualified technicians, is stressed. At the same time, due attention is paid to the training of managerial, scientific, technical and other professional cadres.

The model of socialist educational systems in Viet Nam in the new stage is:

– Young bud education (from birth to 6 years old),

- General education: 9-year basic general education plus 3-year secondary education (from 6 to 18 years old),
- Specialized education: vocation schools for training technical workers and middle level specialized schools for training middle-level technical cadres,
- Higher education; universities and colleges,
- Complementary education and in-service training.

This new system is a network of ordinary schools and in-service training schools.

iv) In the immediate future, an attempt will be made to achieve compulsory 9-year education for children, preparing them for the subsequent education: either general secondary education schools, vocational schools, middle-level specialized schools or vocational classes. The new educational system has not only a network of schools relevant to the national and local structure but also many appropriate types of schools and learning forms to provide lifelong education to the working people. More attention is to be paid to schools for talented and handicapped children.

v) The educational content and method is oriented to improve the quality of comprehensive and vocational education, reflecting the social progress and scientific and technological achievements; to develop the students' creativeness, intelligence, talent and activeness; and to co-ordinate the educational inter-actions among the school, family and society.

vi) Since teachers and educational personnel constitute the main force in education and interact with children, they should be kind-hearted, qualified, socialist-minded and love their occupation and students. The teacher educators should also have the above qualities and accordingly the system of teacher training colleges should be reformed. At the same time, spiritual and material incentives should be properly provided.

vii) It is necessary for a broad mass movement to participate in building new types of schools. It involves both the struggle against wrong Concepts and backward organizational forms, and the entirely new construction in education in order to promote educational tradition and make use of advanced educational experience in Viet Nam.

c) *Some implications of the strategy for educational development*

i) The objectives of general education are not only to prepare a labour force for the country as well as for each region but also to contribute to the laying of cultural foundations of the nation and the all-round development of the personality of the learners who come to terms with themselves, and interact with society and nature in the service of man, so as to realize three-fold educational objective, i.e. attainment of individual happiness, social good, place in the world and mankind's progress. Educational strategies should be in keeping with the people's traditional thirst for knowledge and should make meaningful application of the experience of other countries.

ii) Education is the objective and at the same time the means of economic development. To invest in education means to invest in the economy in advance. The development of education and the development of the economy are mutually dependent. The educational sector responds to manpower demands of the economy in such a manner that the gap is narrowed between the city and the countryside, between agriculture and industry, between physical and mental labour.

iii) Both quality and quantity should be given adequate weight in educational development. The movement for universalization of primary education should not sidetrack the concern for the training of qualified specialists and experts.

iv) Learning should go hand in hand with practice: education should be combined with production; and the school should be linked with the community. This should be done with a view to develop the whole educational process, by integrating the educational process conducted inside the school with that of the out-of-school process, the educational process conducted at schools with that conducted within the family; and educational processes with life and work.

v) The school is not only an educational institution but is the centre for the cultural life of the community. It provides the science and technology needs as well as requisite manpower for the local community.

vi) It is the task of the national government to balance educational development in smaller units like the 500 districts in Viet Nam, which should in their turn oversee similar balancing at the country and village level.

Chapter Three

ISSUES AND THEMES FOR THE REGION

The Value of futures studies

Three types of worthwhile purposes were seen as achievable in futures studies:

1. Identifying possible alternatives for the future, in order to enable the desirable alternatives to be emphasized and developed

The future does not exist, as such. Some features of it are shaped by existing factors, e.g. some aspects of demography, but more features remain open and subject to alteration. A fundamental purpose of futures studies is to enable us to make the maximum contribution towards shaping the future.

Implicit in this approach is the importance of goal-setting, of the need to state clearly the values we hold about human life and human society. Seen in this context, a major purpose of these studies is to enable us, from our identification of possibilities, to move towards the desirable ones, in terms of agreed and stated values. Such an approach will involve us in a critique of the present, a situational analysis.

We need to provide continuous means of checking on the feasibility, worth and achievement of our goals, if an approach like this is to be realistic. Otherwise we risk operating in an unreal world, where aims and objectives are statements of pious hope and have no continuing link with reality.

2. Building a policy development capacity to identify and analyse future opportunities and dangers, so that many problems can be avoided and positive policies developed

There is a tendency in many of our organizations to react to problems after they have occurred. To some extent, this is inevitable as not all possibilities can be identified. However, the effects of the

happening of some problems are so severe that the possibility needs to be avoided at all costs. Still other problems, if foreseen, can be averted or avoided with far less damaging effects than trying to remedy them after they have occurred. A future-oriented approach encourages such a way of working and organizing, in contrast to adopting a purely reactive mode. Education is not determined by economic and technological factors but must be an interactive process, taking account but also influencing.

3. Assisting people and organizations to become more flexible and future-oriented, so that both the capacity and the will exist to respond to identified needs

It is of little value to be able to determine policies of long-term value if the political will to implement them does not exist. This political will has at least two aspects. Firstly, advisers to political figures must have the capacity to analyse trends and indicate clearly the short-term and long-term benefits and difficulties. Frequently this will mean the development of an organizational capacity to look ahead, a capacity for policy development as well as the more usual one of problem-solving. Educational organizations are often lacking here.

Secondly, politicians will need to have a sense of public support for their actions if they are to pursue long-term goals. This implies an education programme to make people more generally aware not only of scientific and technological issues, but of their social and moral implications. The move to an 'information-based society' can take many forms, some of them highly undesirable. It cannot be improved by turning away from technological change but by making that change subject to the requirements of a society in which all its members are valued.

The Role of forecasting techniques in futures studies

The Meeting did not spend substantial time on the discussion of techniques of forecasting. This is not because of any feeling of a lack of importance. In fact, a specific request for Japan was that they might cover this area in their national paper. It features to different degrees in other national papers.

We feel it is important, however, to distinguish clearly between

futures studies and the predictive exercises necessarily involved in planning. Futurology, as a predictive study, has come under criticism consistently, as has prospective planning, because its predictions have rarely, if ever, been accurate. Futures studies are not involved in predicting *a* future, but in disentangling future possibilities and relating them to agreed values. It uses predictions (and the associated techniques) to the extent they are helpful in determining the implications of a particular group of issues, social, technological, scientific, political or economic. It may be of value more in preventing the occurrence of certain futures than in making accurate predictions.

There is another important sense in which futures studies is not concerned too strongly with predictions. It is involved as much, or more, in shaping the future as it is in predicting its form. Techniques, quantitative, social analysis, demographic, economic, etc. are all of relevance but in a strictly subordinate sense.

For the purpose of the present APEID initiative, it was generally felt that the priority did not lie in the further development and study of predictive techniques. These are the proper domain of specialized institutions and our analysis indicated that this area of study was proceeding satisfactorily. APEID's priorities were seen more as the following:

- to continue with the identification of social and personal patterns and changes which are important to education;
- to concentrate attention on the impact that education might have on those patterns and changes, and the responses in purpose, organization and process which may help towards a better future for individuals and society.

Implications for education

1. Organizations and structures

If education is to play an effective role in achieving the futures that are desired, then it is essential to develop educational organizations and structures so that they will facilitate rather than hinder changes necessary for the realization of our objectives. It becomes necessary, for instance, to develop organizations and structures which have the capacity to monitor social, economic, political,

cultural and technological changes that interact with education and hence affect educational outcomes. The following considerations are suggested:

a) To ensure that human resources are able to meet the challenges arising from changes in the various sectors, it appears to be an advantage if the staff is interdisciplinary in orientation and approach.

b) There is the need for the staff to keep abreast with the latest developments. One of the means to do so is the organization of seminars, conferences, workshops, forums and brainstorming sessions which provide an arena for the exchange of ideas, and discussion of problems and their solutions. Also, staff should be encouraged to participate in similar activities and programmes which are organized by sectors other than education.

c) Participation in joint programmes and projects which are related to education is an activity which will permit interaction between the educational, political, economic and technological sectors.

d) Staff members are to be given the opportunity to rotate, in terms of postings, within and outside the educational sector. The interchange of staff for an adequate period of time and at different levels (national/regional) and points of time (pre-service/in-service) ensures an all-round exposure.

e) Research, to be effective and meaningful, needs to be problem-solving and future-oriented. Often, research efforts tend to be either descriptive or prescriptive in nature, with limited practical applications. Certainly, we need a cadre of people who are imbued with the right attitudes and expertise to teach and train youngsters so that their orientation is towards problem-solving, policy formulation and the futures.

f) A data bank seems necessary to ensure the collection of information which enables, for example, the identification of solutions to common problems experienced in educational systems other than one's own.

g) Various types of research techniques can be experimented with, including those which are derived from other disciplines. There is also the necessity to direct efforts toward integration of research findings.

h) To enhance effectiveness in operation, there is a place for the establishment of linkages between educators, scholars and industrialists. The Institute of Democratic Education of Japan is but one example of a private circle of academicians from various disciplines and includes mass media specialists. Its membership represents people with diverse interests but sharing common aims. In this instance, the 'invisible college approach' is adopted to increase the effectiveness of the education system.

i) The establishment of a channel of communication which will allow continuous dialogue between existing organizations in and outside the education sector.

j) Above all, people themselves need to be future-oriented so that they have the skills and capacities to cope with the predictable as well as the unpredictable. The future must be consciously thought of and in the information era, assumptions made in the past may no longer be relevant to the solution of problems in the future.

2. Interaction between political and educational sectors

The realization of alternative futures will necessitate greater and more meaningful interaction between politicians and educators. It is a fact of life that education, more often than not, tends to become a political football, particularly in developing societies. We suggest that:

a) A close rapport between politicians and educators is desirable. In practice, educators are inclined to think that politicians are not sufficiently sympathetic to and understanding of their problems. Politicians perceive educators as theoreticians whose solutions to issues are insufficiently practical for adoption. Given these perceptions, we may need to develop a language of communication and mode of operation that will enhance the relationship between politicians and educators.

b) Conflict in terms of educational policies and issues remains inevitable between members of the government and the opposition. Whatever these conflicts may be, it is the role of educators to indicate the future consequences of policy decisions, anticipate future problems and begin the design of alternative solutions so that politicians have more options for choice.

c) To enhance the achievement of prescribed educational goals, we need a two-way communication process between the policy makers and those at the grass-roots level. Facilities should be provided for the collection, analysis, utilization and evaluation of data on the implementation of activities and programmes. This will enable both educators and politicians to modify strategies and goals in line with the ever changing political, social, economic and technological environments. Through feedback and 'feedforward', the evaluation process serves as an early warning system. Educators need to win the hearts and commitments of politicians and the people if education is to help create the futures which society needs and desires.

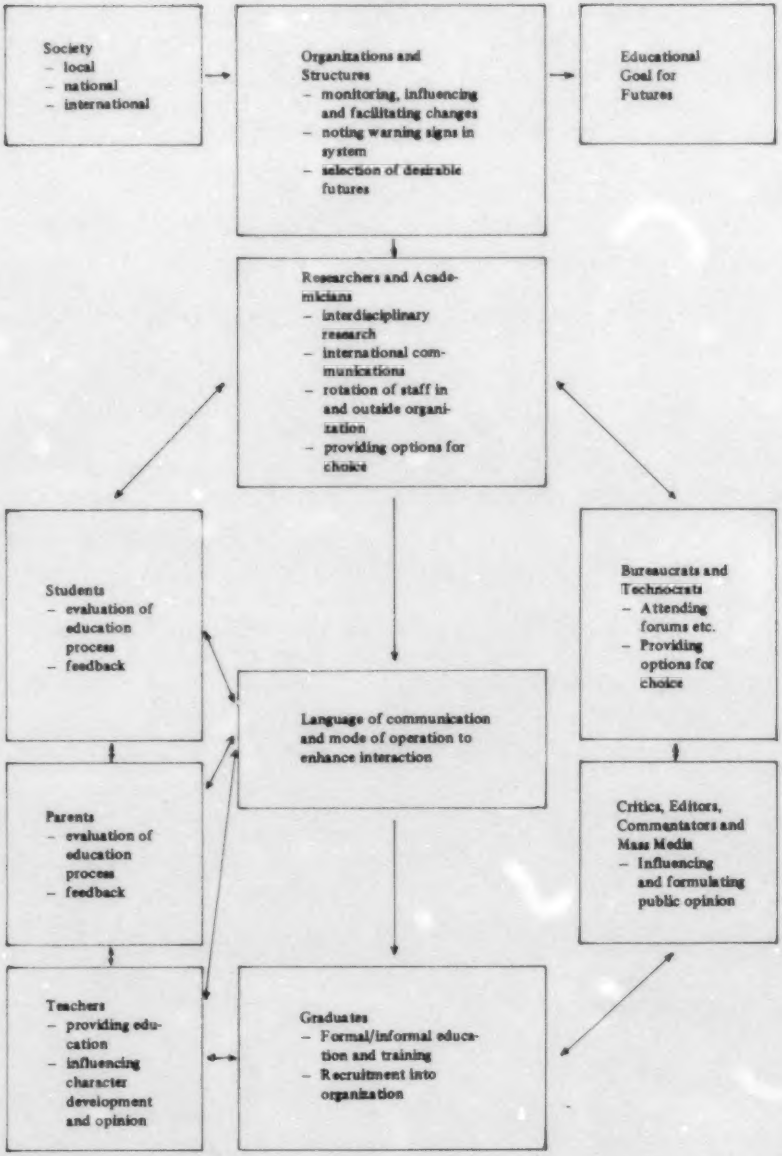
3. The curriculum

Curriculum – general framework "The Global Village"

The general framework for curriculum in the future world is organized around the theme of preparation for life in the "global village"; we will live together in an interdependent world but we must each find our identity in face-to-face communities in which we are recognized as individuals. The concept of the global village was used by the Meeting in a special sense, as a shorthand for the variety of memberships available to people: from the world society, increasingly interdependent to regions, nations, provinces, and to the closest neighbourhood person-to-person grouping. It recognizes that present development processes are leading to a less stable global ecosystem and more severe inequalities at the national and global scales. In this context we must work to restore the integrity of the global ecosystem and the wholeness of the human personality. Each person must be equipped to be a part of the global community, a part of local face-to-face community and confident of his or her

III – 8

Strategies for Exploring and Promoting Interaction between Education and Future Studies from the Viewpoint of Organizations and Structures



special identity. The discussion of the general framework is organized under three headings:

a) *Situation.* The global village will be a world where there is less paid and formal work and an increasing quantity of electronic information. Education should help us to achieve the transition to this world and help us to live more effectively in it. To make this transition, we must deal first with increasing inequalities and make the biological and social adjustments associated with new technologies. Our survival and comfort as a global community and as individuals within this community will require more caring, a greater awareness of our own personal and cultural identity and a wider range of opportunities for personal development.

b) *Curriculum goals.* Equal emphasis will be given to thinking, feeling, doing, and being. The following goals are listed:

i) critical thinking;

ii) value clarification and formulation;

iii) the ability to select, access, evaluate and integrate information for our own needs;

iv) better decision-making (as individuals, as small communities, as nations, as a global community);

v) co-operation;

vi) communication (to communicate feelings and information, to be able to listen as well as speak, to send information as well as receive information);

vii) self-awareness (awareness of one's self as a person, and as a part of a group with its own special identity within the large global village);

viii) creativity (being able to exercise a wide range of abilities in an original and creative way); and

ix) aesthetic appreciation.

c) *Responses.* The curriculum must take into account five aspects of education:

i) information and knowledge;

ii) skills (including computer skills, skills and analysis, skills of problem-solving both as individuals and as groups);

iii) feelings and emotions;

iv) values; and

v) identity and self-awareness.

- The curriculum must restore the unity of people and the natural world (It must be holistic).
- The curriculum must strengthen the awareness both of cultural distinctiveness and of the the unity of mankind and must emphasise that inequalities, intra-national and international, seriously threaten harmony.
- The curriculum must provide opportunity for feelings and emotions to be recognized, developed and understood.
- The curriculum must recognize the importance of world peace as a necessary condition for human survival.
- The curriculum must provide opportunity for people to work together in groups (solving problems, recognizing each other's needs and feelings, encouraging each other's creativity).

The emphasis in the curriculum for the global village will be on "learning how to learn" so that education is a lifelong process. To achieve this, there must be greater use of community resources and stronger linkages between the world for formal education and the life and activities of the community. Each of us must be equipped to continue learning for ourselves and to continue learning with others.

The curriculum – instructional methods

This section is also organized under three headings:

a) *Approaches* – Thinking for tomorrow . . .

i) Evaluating alternative futures and being open to alternative futures

ii) Global village curriculum

(which prepares us for the "global" and the "village")

iii) Better choices

(made on the basis of knowledge, intuitions, feelings and values)

iv) Interdisciplinary approach

(involving team teaching, individual and group learning, school and community co-operation).

b) *The emphases*

The emphases should be on the process of learning as well as the content.

Futures study should be seen as a form of value clarification. All studies should develop an awareness of the future consequences of our actions and decisions.

c) *Methods to be used*

Some of the methods stand in sharp contrast to each other. They should, however, be seen as complementary and in designing curriculum should be carefully balanced. There should be:

i) self-paced and individualized learning programmes;

ii) critical analysis, listening and viewing skills as related to multi-media;

iii) group learning which involves a team approach to problem solving and assists individuals to identify, respect and affirm the special contributions made by others;

iv) utilization of distance learning; and

v) utilization of the resources available in family, neighbourhood and community.

The methods used will be directed to specific tasks and current understandings but must provide skills for lifelong learning.

4. Resources for futures education

Some existing resources will continue, some new technological resources will be available and some traditional resources may be recovered.

a) *For classroom use*

The book will continue to be a major resource for classroom and individual study. In addition to books; audio cassettes, videotapes, maps, charts, games and materials will continue to be important

but will need to be oriented to future needs and new instructional methods.

The computer technologies will provide more rapid access to much greater quantities of information and will become more widely available in schools, homes and libraries. As the information explosion continues, we will increasingly reach the situation where students have access to as much or more information than their teachers. Part of education will be directed to the skills needed to access and process information through computers.

In situations where access to information is impersonal and electronic, there will be a need to re-establish contact with people and contact with the natural and built environment. Members of the community and the outside world in the vicinity of the school will be an important resource.

b) *For in-service training*

Conference and study group facilities will be needed, complete with audio-visual information retrieval and written materials. Directories of global futures and examples of educational materials for future education will be needed. Consultants and facilities will be required and training programmes will need to be integrated and co-ordinated by means of national and regional networks.

5. Personnel for futures education

Futures education will make new demands for personnel in the formal education sector and require the development of appropriate personnel to support the efforts of individuals, families and community groups in the informal and non-formal sectors.

Education in the future will follow a greater diversity of patterns and will need to be supported by a greater range of specialists. The central person will, however, be the professional who works with individual pupils and groups or classes of pupils to design and co-ordinate the learning programme. As the amount of electronic information increases, the amount of formal teacher instruction will diminish. The role of the teacher in the formal education programme will shift from that of instructor towards that of facilitator. Secondary teachers, for example, will need to develop inter-personal

skills similar to those of their colleagues in pre-school education and learn to work as part of resource team which will include librarians and audio-visual technicians.

Community groups and organizations will play an increasing role in informal education and will look to the formal education system for support and resources rather than direction and control. In this situation a new type of professional with skills similar to the "animateur" insure in the cultural sector or the "detached community worker" in the community development sector will be required.

Further discussion on the need for personnel is contained in the section on Preparation of Personnel. That section deals largely with teachers, but recent studies by APEID have emphasized the need for changed roles and new forms of preparation for such diverse groups as: teacher educators, curriculum specialists, counsellors, principals, community liaison, educational administrators. It is clear that the changes in organization and process, linked with the societal changes we have discussed, pose radically new opportunities in the areas identified. The APEID Workshop of 1982 on *Social Change and Training of Educational Personnel* is a relevant document. A forthcoming *Occasional Paper* of ACEID covers this same important area.

Issues of implementation

1. *The role of the teacher*

How will studies of the future affect the role of the teacher? The projections and anticipated problems in these studies suggest that the teacher of the future will perform expanded functions and new roles not associated with conventional conceptions of the teacher's work. The world of the future will be one in which there is a global system of communication and information of tremendous scope and richness of detail. It will also be a world of rapid technological and social change, one in which the teacher herself will not only have to make the necessary adjustments but also prepare the students to become citizens of that world. It is clear that the teacher will require new knowledge, skills and attitudes to be effective in a future characterized by inter-connected social problems and increasing interdependence among nations. The teacher will have to develop greater sensitivity and responsiveness to the problems of living and

teaching in a global situation. In that situation the individual will still grapple with problems of survival, on the one hand, and entire societies will have to learn the art of collective survival, on the other. The teacher will surely have to deal with this and yet transcend it because mere survival does not suffice; it is survival as *a human* race that is at issue.

Fundamental to effectiveness as a teacher is an awareness of the major problems confronting society and the world at large. Such awareness must include a more sophisticated level of knowledge than contemporary teachers possess. Rapid social change, technological advances, the continuing threat of war, the dangers of nuclear weapons, unabated population growth, the degradation of the environment, pollution, a world-wide communication system that may result in information overload or even misinformation – these are some of the issues with which to become familiar, not to mention the disruptions in social relations consequent to these problems. At the same time teachers should not lose sight of the main purpose of their work: to enhance the humanity of their charges.

The teacher and technology

The teacher of the future needs to be more technologically adept and knowledgeable, particularly with respect to computers and other equipment, supportive of educational efforts. Computer literacy will facilitate the organization and presentation of information, accelerate the pace of learning, and relieve her of hiterto tedious tasks. Computers and other audio-visual and electronic aids will also facilitate the teaching-learning process. If used wisely and imaginatively they can help make learning an engaging rather than a monotonous activity.

The teacher and research

Research is the foundation of knowledge and if she is to keep up with developments in the fields of teaching, the teacher must be able to work with researchers on educational problems. Moreover the teacher should identify significant research problems, understand the results of research, and develop some adequate level of research literacy. This is not to say that she will have to conduct sophisticated research, but the classroom, school and community do present

opportunities for action research. The important point is that teaching that is informed by pertinent research findings and which includes the intelligent application of research results will be challenging and relevant.

The teacher and the community

Another important dimension of the teacher's work is her role in the community. While she may not be actively engaged in community development she can support non-formal education programmes by way of her extensive knowledge of community resources and local culture. She can identify local experts, skilled craftsmen and artists whose work may be developed into a cottage industry or at least, income producing activities. The teacher can advise new professional workers on the cultural norms and values that the community prizes and thus help them avoid mistakes in dealing with the people. She can counsel youth and adults about opportunities for employment and self-employment, about training programmes that may enhance such opportunities. Through such activities the link between education and work can be re italized, giving it a positive reality.

The teacher in the school

But the paramount work of the teacher will still be in the school.

Here, however, the focus is on helping students develop self-directed, life-long learning skills, encouraging them to think critically, to make intelligent decisions, to think creatively and imaginatively. This kind of teaching will not be easy; it is radically different from the prescriptive, information-transmitting role of the traditional teacher.

The teacher will need support services and to know how to tap a wide range of resources for this type of teaching. She will be open to questions from learners not currently occurring in the ordinary classroom. Who are the people in the community who can assist in helping pupils learn? How will she handle the great amount of information available? Should the teacher process such information alone or in conjunction with the students? These are not idle questions, they involve the very nature of the learning process and the

intuitive wisdom of great pedagogy. How to identify creativity and develop it? There are no pat answers to these questions, but they suggest that teaching can become a creative, challenging enterprise.

The foregoing are the anticipated roles of future teachers. They entail the continuing education of teachers throughout their career, an education that will obviously include new content and practices, and even require a radical restructuring of the pattern of teacher education itself.

2. *Political leaders, policy-makers and bureaucracy*

The issues and changes needed in education will entail changes in policy. Therefore political leaders and policy makers need to be informed about current and anticipated educational problems and proposals for policy changes. This is not easy, given that some governments tend to prescribe policy with minimal consultation with educators and the concerned public. It is up to educators to mediate these matters, to open lines of communication between them and political leaders and the bureaucracy; and between them and the people whom education seeks to serve.

Bureaucracies may need to consider decentralization and other measures designed to involve people at the local level in decision making. This would widen the distribution of the sources of educational authority and make education more responsive to the needs of the people. Strengthening links with the people will enable educational organizations to avoid the rigidity resulting from excessive bureaucratic procedures and remoteness from reality.

3. *Community*

It is equally important that the individual retains a sense of community and personal identity in the global society. Even as a world citizen, there is a need for a special cultural identity. In light of the technological and cultural dominance deriving from aggressive marketing systems, the maintenance of this unique identity will be increasingly problematic. The point is that in the world of the future each person will have to identify with several layers of increasingly larger social groups: the family, community, the nation, the global society. But personal cultural identity is the core of the

self, although this sense of self develops from interaction with other selves in the immediate cultural milieu.

That cultural milieu contains valuable elements worth preserving, viz., certain values such as co-operation and sharing, instead of untrammeled competition, giving rather than receiving, pursuing life-sustaining activities instead of lethal ones. Local cultures also include native systems of learning in the family and community which teachers may find valuable. They involve alternating periods of actual work, study and play, a pattern which schools of the future may find valuable in restructuring education. Active engagement with work should not be separated from the intellectual activities of study. There is a need for new models of education and the village may well contain useful cues for developing such models.

4. *Leisure and employment*

With such supportive services as computers and other hardware, teachers as well as students and people in general may have more leisure time available. Moreover the present scarcity of employment opportunities may extend into the indeterminate future. Perhaps conceptions of employment should be revised such that the individual's life cycle in the future will consist of alternating periods of work, service to the community, study and recreational activity. However, leisure spent in mindless absorption of trivial, alienating entertainment brought by electronic – media should be eschewed in favour of communiity activities that reinforce social commitment and the sense of community. Local history, folk lore, folk songs, indigenous drama, local arts should be collected and encouraged to develop. These are cultural forms through which the people can express themselves through images that symbolize their aspirations to become masters of their own destiny.

Chapter Four

CURRENT LEARNINGS AND FUTURE PERSPECTIVES

What have we learnt? What can we do?

The present exercise has provided a diversity of experience in working with the futures studies carried out in eight countries of the Asia and Pacific region. In some cases futures studies have been carried out by agencies with an on-going mandate and as a result, the studies have been cumulative in their impact. In other cases, futures studies have been ad hoc, unco-ordinated and non-cumulative. The studies evaluated have, with very few exceptions, drawn unevenly on the range of pertinent disciplines. Many, for example, have involved forward projections of current trends and have lacked a depth of historical awareness which would recognize the continuities and discontinuities that have distinguished previous development experiences. Most have dealt in detail with aspects that can be quantified and assigned money values; few have attempted to give substantial attention to other aspects of human existence.

There is also great variation in the manner in which futures studies have contributed to planning and decision-making at the national or sub-national level. In many cases futures studies have been detached from the government agencies which allocate national resources and make decisions which have a direct impact on people's lives. The fact that some future organizations have had their budgets cut and their mandate terminated may reflect their inability to provide effective and relevant inputs to planning and policy-making.

Most futures studies organizations have acknowledged the importance of education but few have made the effort to initiate or continue dialogue with educational agencies and policy-makers. In this situation, a number of educational agencies have initiated their own studies to calculate future needs for teachers, schools and classrooms. Excellent work has been done but opportunities have been lost and the results of such studies have not been seen in the context of a wider social and cultural future.

Futures studies have also been uneven in their degree of interac-

tion with the public at large. Some have worked out their own scenarios for the future and disseminated these through publications or the electronic media without providing an opportunity for response. Others have organized interactive processes where members of selected groups (often the elite) or the public at large have been given the opportunity to express their hopes, fears and expectations for the future. In some cases, futures materials have been developed and used within the formal education systems.

The organizations involved in futures studies have differed widely in their attitudes to political parties. Some have ignored politicians and directed their efforts to the public believing that they in turn will influence the politicians. Others have interacted with the party in power and developed scenarios which are consistent with its philosophy and priorities. A number of studies have identified problems which arise when futures studies attempt to interact evenly with the full spectrum of political parties in any one country.

It became apparent in the course of preparation of the country studies that there has been very little inventory and evaluation and co-ordination of futures studies works in the individual countries. In most cases, a sufficient body of experience is in available valuable for this type of exercise to be carried out to advantage. In most cases, there is one identifiable institution which can be regarded as the nodal institution for each country. This Meeting recommends to Member States that such institutions be encouraged to carry out an evaluation of their own national situation and compile an inventory of work completed in published and unpublished form. The following questions are suggested:

a) What individuals and agencies have been involved in futures studies over the past decade?

b) Why do some futures studies achieve their goals and others fail?

c) How are futures studies integrated into decision-making at the national, sub-national and local levels?

d) To what extent have futures studies created a climate of opinion or a consciousness that encourages politicians and voters to give priority to longer term goals?

e) How can the educational process for the school population and the community at large be improved?

f) How can planners and decision-makers be encouraged to enlarge their time horizon?

It is within this context that we suggest a need for case studies which explore the use of futures studies in a more specific manner. The interface studies described below are one way in which this can be done.

Interface studies with country clusters

a) What interface studies are

Education is an important element in the system of interdependencies and it interacts with other sectors – political, economic, social and technological – in the formulation of the future. It follows from this that futures studies designed for an educational perspective should firstly be rooted in holistic concerns so as to avoid fragmented distortions; and secondly be based on in-depth analysis of the interfaces between education and other sectors to develop sharper sensitivities and deeper understanding of the phenomena.

Following the completion of national studies on educational and alternative futures which adopted a holistic approach, it was considered a useful exercise to follow up with interface studies. The undertaking of interface studies will, among other things, complement the national efforts, minimize generalizations and maximize opportunities for in-depth study of the contribution of education to issues of considerable importance in the future. Thus a number of issues in which education is a primary input were identified, these being:

1. Education and communication
2. Education and employment, work and leisure
3. Education and polity
4. Education and technology
5. Education and co-operation and competition
6. Education and peace
7. Education and business interests
8. Education and ecosystems.

Taking into consideration the national interests and resource constraints of the countries concerned, and the value of involving a group of countries on a particular topic, four of the eight interfaces have been selected for study. These are education and communication; education and employment, work and leisure; education and polity; and, education and technology. It is to be emphasized that this selection does not imply that other interfaces are any less significant.

The descriptions which follow are not meant to be a comprehensive treatments of the items involved, but are examples of particular emphasis which might be followed in specific countries, or groups of countries.

Education and communication

The emerging worldwide system of communication presents educational opportunities not previously considered possible. The rapid development of communication technology – print, radio, television, computers, satellite transmission of news and information offers a rich array of learning situations and content. There is some apprehension, however, that the future may become more oppressive than the present as a result of this technological advance. It is claimed that small groups who have the necessary skills and equipment for the dissemination of information will be in a strategic position to control human behaviour on a wide scale. This is not as Orwellian as it seems. In some countries, authoritarian governments prescribe limits to the amount and type of information that can be disseminated over the mass media. Elsewhere, newspaper publishers concerned with profits from advertising implicitly constrain reportage of news and information.

There can also be an overload of information transmitted through the media. This may create an incapacity to absorb, select and judge the messages transmitted. Or there can be deliberate manipulation of messages such that the models of reality that people learn from the media are either incomplete or distorted. In curriculum development what is omitted may be as important as what is included. So it is with the multi-media in our midst and the new ones that are almost certain to emerge in the future.

On the other hand this rapid, global system of communication

can enhance, accelerate and enrich learning. It will be possible to listen to video-taped lectures of world scholars, to the musical, theatrical and dramatic compositions of great artists, to observe experiments in microsurgery as well as space explorations. We are already witnessing critical, historical events all over the world through the media. All of these approaches can be utilized in the school itself. At the moment, the one disadvantage of these media is that they are one-way; they do not allow learner/watcher reaction or participation. But the time may not be far off when this will also be possible.

What of the book, the traditional anchor of the teaching-learning process? There is no indication that the book will disappear as a form of communication. It has the advantage of allowing the reader to pause, to reflect, to judge. The book can be re-read and first judgements can be reviewed and revised. In this sense the book is superior to other media, because it allows opportunities for the development of cognitive abilities – from comprehension to evaluation and synthesis.

Because the communication system is essential to learning, education must make use of the various media wisely, maintaining a judicious balance among them. Watching-listening cannot be equated with learning. The development of functional literacy in some rural areas can actually be retarded by the excessive time devoted to listening to the transistor radio. The educational and informational content disseminated through mass communication is inextricably linked with educational purposes. It has become the business of education not only to evaluate the messages transmitted through the mass media, but also to anticipate and avoid the dangers to freedom inherent in the communication system. This is an emerging function of education, one that will likely extend into the future, considering that there will surely be further advances in the technology of communication.

To put it succinctly, those who control this technology may eventually control the minds of men.

Education and employment, work and leisure

Rapid developments in electronic technologies and the widespread diffusion of these have profound implications for the

world of paid employment and the balance of paid employment, unpaid work and leisure. Developing countries have long been aware of the situation where a substantial proportion of their active labour force is unemployed or underemployed. All of the industrialized countries are now facing a situation which is similar in nature and different only in magnitude. In the future world, less and less time will be required to meet production requirements, more and more time may be given over to human interactions and personal development.

In this situation education must make a multiple contribution. Firstly it must make decision-makers and citizens aware of the problems that are faced in the adjustments that must be made as formal paid employment diminishes. Futures organizations and educational institutions must combine their efforts to equip people for the multitude of personal and political decisions which must be made. Secondly the levels of technological and scientific education must be extended to support an increasingly sophisticated technological and informatio.. ociety. Thirdly people must be educated to contribute effectively through the informal money economy and the unpaid or gift economy of households and neighbourhoods. Finally each person must be given the training and the opportunity to express his or her creativity through recreation, leisure and artistic activity.

Education and polity

In many developing societies, there is a need for national unification because such societies are made up of groups with rather sharp differences in race, religion, language, not to mention social class. While this plurality may be maintained, there are issues on which such groups should think and act as a people, viz. national security, defence, foreign policy, global trade policies and the search for national, regional and international peace.

Education is a means of socializing children, youth and adults into orientations reflective of national identity which is the basis for unification. Civic education has long been accorded an important place in school curricula to achieve this end: citizens who understand their history and traditions, who have pride of country and are committed to serve their societies.

It is also important to state what is not intended in civic education. It does not aim towards cultural homogenization; the diversity and richness of sub-cultures that make up a nation are healthy. In fact, it contributes to the uniqueness of each national society. Nor does such education intend to produce obedient, unquestioning attitudes in its citizens. On the contrary, it seeks to develop active citizens who can participate intelligently in national decision-making and policy formulation.

For this purpose, a common language for teaching is helpful, although it is not a necessary or sufficient condition. Perhaps what is important is the teacher who knows how to use proper curricular content to advantage, understands the purpose of developing a strong sense of national identity in those who are taught, and above all, has a deep commitment to this goal. Every member of society is involved in the task of nation-building.

Because almost everyone acquires at least primary education, it is important for civic education to begin in the initial years of schooling so that the formation of civic attitudes, love of country, and social commitment can have an early start. This is not to say that the school is the only agency of socialization for this purpose. Certainly the family, neighbourhood and community play equally significant roles in this process. Other government agencies such as institutes of culture, national museums, writers' and artists' associations would all be concerned in the formation of a strong spirit of national unity.

The emergence of universal primary schooling makes education a major regulator of the structure of human experience. If developing nations are to be transformed from being creations of colonialism to authentic, sovereign states which can participate in the shaping of their future, education can help realize this by the continuous formation of a vigorous sense of national identity.

National integration is based on an equitable sharing between all groups in a society. There is an equal need to develop harmonious relations with other countries, to make the nation part of the international community.

Education and technology

From the international perspective, it will become increasingly

difficult to bridge the ever-widening gap in science and technology between the advanced and developing countries. This is partly because of the head-start that industrialized nations have made towards the development of scientific and technological studies and research. Furthermore, individuals from developing countries who are given the opportunity to study abroad and thus familiarize themselves with the workings of the modern systems of science and technology and likely to be limited in numbers.

Another obstacle to the development of new technologies on their own initiative is that for far too long, the technological know-how of developing countries and even a developed nation like Japan has been imported and adapted from the Western industrialized societies. A considerable amount of effort is therefore required if all societies are to be creative in terms of new inventions in science and technology.

Given this situation, it is suggested that the authorities concerned consider the functions of national institutions and universities so that they become more widely available through the country and serve as centres for the transfer of technology at the local level.

To ameliorate the present situation, the following measures are recommended for implementation within the education sector.

1. Renew the curriculum at the primary, secondary and tertiary level so that it will promote the attainment of objectives set out for science education and technological studies.

2. Develop a curriculum which will take into account the needs of slow learners to minimize their difficulties in the learning process.

3. Identify the gifts and talents in children either at the elementary or secondary stage of their education so that these can be used for the benefit of the individual and society.

Implementation through APEID

One of our criticisms of past efforts in this field has been of the failure to follow up initiatives. Even where these have been well-

based and carefully developed, to leave them as a set of proposals with no mechanism for continuation, has proved to be very unsatisfactory.

Important outcomes of Unesco's initiative in futures studies and education have included the following:

- The revival of interest in this area resulting in a review of work completed or currently under way; and, preeminently,
- the creation, in several countries, of structures in the form of nodal institutions for more sustained and systematic efforts. These efforts have been promoted within the framework of APEID.

The APEID framework itself provides a useful and experienced base for implementation, an immediate network of centres throughout the region, in 22 countries. The regular APEID network can provide an immediate means for collecting, developing and disseminating information on futures studies, can assist in facilitating and promoting the exchange of persons between member countries, and can provide information on the availability of technical services relevant to such studies. In this particular area of futures studies, the main link of APEID will be through the nodal institutions which will carry a direct role in the studies. The nodal institutions will be those which operate as a central body in each participating country, co-ordinating the continuation of these initiatives. The Unesco Regional Office for Education in Asia and the Pacific, may, through ACEID, provide a link with other Unesco agencies of interest, and with other relevant international bodies, facilitate joint efforts by the countries, say by distribution of special studies among the cluster of countries, and communications among the countries through publications, review of the work at the Regional Consultation Meetings and at other forums.

The nodal institution could well be based on the centres which have commenced the future studies at the invitation of APEID. The co-operation and involvement of National Development Groups in these developments is important and might well be begun with the circulation of this report. A major role within member countries would be left to the nodal institutions. An early task would be to create a broader consciousness about the value and prospects of futures studies. To do so, again this report might be of value. A

further early task would be in the development of the interface studies, the interface between education and the following areas:

- communication;
- work, employment and leisure;
- polity;
- technology.

It would be important for the nodal institution to place these studies in a broader setting, so that they are not single issues but part of a total concern with the future of society. In doing so the institutions should develop information services for this purpose and keep alert to the possibility of new problems and initiatives, not previously taken into account. This would require the institutions to act as centres of fundamental reflection on the central questions – on learning and teaching, on new paradigms for futures studies. It would also suggest the value of developing inventories on some inclusive issues, education and the quality of life, peace studies, education and values.

An equally important role will be to involve current organizations for whom these studies will be a central concern. This will include education departments and school systems, teacher education institutions, government bodies, curriculum and research centres. It is worth repeating our earlier point, that studies which do not link with bodies responsible for the day-to-day organisation and decision-making can have little influence on the future. Neither can studies which ignore the responsibility of involving the groups of people concerned in various areas, in the development of implications. This report was sub-titled *Dialogue Towards a Better Future.* The nature and extent of that dialogue is important: involving on one hand the range of contributing specialists needed to give a comprehensive analysis; consulting on the other hand as widely as possible in the general society. It would be ironic if studies designed to increase the power of individuals and societies over their own lives, should ignore the need for genuine involvement of those people.

ANNEX I

AGENDA

1. Presentation of the background of the Meeting by the Secretariat.
2. Review of the national studies.
3. Analysis of relevance of these futures studies to education: education in an interactive relationship with futures studies.
4. Educational implications for:
   (a) values of futures study;
   (b) role of forecasting techniques in futures study;
   (c) organizations and structures;
   (d) the curriculum;
   (e) personnel and resources.
5. Future perspectives: (a) what can we learn? (b) what will we do?
6. Closing of the Meeting and adoption of Draft Report.

ANNEX II

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ANNEX III

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Information Documents

ROEAP-83/APEID-IDM.AFE/INF.1 – General Information Paper

ROEAP-83/APEID-IDM.AFE/INF.2 – List of Participants

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ROEAP-88/APEID-IDM.AFE/2 – Schedule of Work

ROEAP-83/APEID-IDM.AFE/3 – Futures and Education, by Phillip Hughes

ROEAP-83/APEID-IDM.AFE/4 – Study of Alternative Futures – Australian Summary, by Phillip Hughes

ROEAP-83/APEID-IDM.AFE/5 – Education and the Future – An Indian Perspective by Moonis Raza, N. Bhagia, B. Prakash and J. Tilak

ROEAP-83/APEID-IDM.AFE/6 – Review of Researches on Alternative Futures and the Techniques of Preparing Future Scenarios, Japan, by S. Ichikawa

ROEAP-83/APEID-IDM.AFE/7 – A Study of the Probable Futures of Malaysian Society in the Year 2000 and their Implications for Education, by Leong Yin Ching, Rahimah Haji Ahmad and Isahak Haron

ROEAP-83/APEID-IDM.APE/8 – New Zealand in the Future World: Some Challenges to Education, by Garth Cant

ROEAP-83/APEID-IDM.APE/9 – Towards the Third Millenium: The Geography of Information and the World of Work, by Garth Cant

ROEAP-83/APEID-IDM.APE/10 – The Philippines: Alternative Futures, by Priscila S. Manalang

ROEAP-83/APEID-IDM.APE/11 – Review of Literature on Alternative Futures of Korea and Techniques used for preparing Future Scenarios, by Hong-Kyoo Byun

ROEAP-83/APEID-IDM.APE/12 – Summary Notes on Future studies and their Educational Implication by Hong-Kyoo Byun, Republic of Korea

ROEAP-83/APEID/IDM.APE/13 – Strategy of Educational Development for the Year 2000, by Na The Nou, Tran Thuc Trinh, Dang Quoc Bao, Nguyen Gia Coc, Pham Nuy Giang, Nguyen Van Viet, Nouyen Van Tien, Nguyen Nuu Dung, Nguyen Gia Muy, and Nguyen Quoc Ghi, Socialist Republic of Viet Nam

The Asian Programme of Educational Innovation for Development (APEID) has as its primary goal to contribute to the building of national capabilities for undertaking educational innovations linked to the problems of national development, thereby improving the quality of life of the people in the Member States.

All projects and activities within the framework of APEID are designed, developed and implemented co-operatively by the participating Member States through over one hundred national centres which they have associated for this purpose with APEID.

The 24 Member States participating in APEID are Afghanistan, Australia, Bangladesh, China, Fiji, India, Indonesia, Iran, Japan, Lao People's Democratic Republic, Malaysia, Maldives, Nepal, New Zealand, Pakistan, Papua New Guinea, Philippines, Republic of Korea, Samoa, Singapore, Socialist Republic of Viet Nam, Sri Lanka, Thailand and Turkey.

Each country has set up a National Development Group (NDG) to identify and support educational innovations for development within the country and facilitate exchange between countries.

The Asian Centre of Educational Innovation for Development (ACEID), an integral part of the Unesco Regional Office for Education in Asia and the Pacific in Bangkok, co-ordinates the activities under APEID and assists the Associated Centres (AC) in carrying them out.

The eight programme areas under which the APEID activities are organized during the third cycle (1982–1986) are:

1. Universalization of education: access to education at first level by both formal and non-formal means;
2. Education for promotion of scientific and technological competence and creativity;
3. Education and work;
4. Education and rural development;
5. Education and urban development;
6. Educational technology with stress on mass media and low-cost instructional materials;
7. Professional support services and training of educational personnel;
8. Co-operative studies, reflections and research related to educational development and future orientations.

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